

ABSTRACT

A method for producing a hydrorefining catalyst includes the step of preparing a carrying solution containing molybdenum, phosphorus, and cobalt or nickel and bringing a carrier composed of an inorganic porous oxide into contact with the carrying solution. A molar ratio of molybdenum with respect to phosphorus in the carrying solution is 2.5 to 7.0, a molar ratio of a total of molybdenum, cobalt, and nickel with respect to phosphorus is 3.5 to 9.0, and a molar ratio of molybdenum with respect to a total of cobalt and nickel is 1.9 to 2.8. pH of the carrying solution is 2 to 5, and a Raman spectroscopy spectrum of the carrying solution has a peak top between 965 cm^{-1} and 975 cm^{-1} . The catalyst obtained by this method is excellent in desulfurizing activity.